

I Claim:

1. An image projector, comprising:

a film assembly comprising a periscope having a  
5 first aperture, said film assembly being configured so as to  
mount a film to scroll in front of said first aperture of said  
periscope;

a motor for scrolling the film in front of said  
first aperture;

a light source projecting light through said  
10 periscope and portions of the film positioned in front of said  
first aperture of said periscope; and

a lens for focusing the light projected through the  
film and said periscope.

2. An image projector according to Claim 1, wherein  
said film assembly is configured to mount a continuous film  
about said periscope, said motor scrolling the continuous film  
around said periscope and in front of said first aperture.

20 3. An image projector according to Claim 1, wherein  
said film assembly further comprises a plurality of rollers on  
which the film is to be mounted, said rollers being rotatably  
secured to said film assembly so as to rotate about  
25 substantially parallel axes.

4. An image projector according to Claim 3, wherein  
said plurality of rollers of said film assembly are configured

to mount a continuous film about said periscope, said motor scrolling the continuous film around said periscope and in front of said first aperture.

5           5. An image projector according to Claim 4, wherein one of said plurality of rollers is rotated by said motor, causing the film, when mounted, to scroll about the rollers in directions substantially perpendicular to the axes of rotation of said rollers.

10           6. An image projector according to Claim 5, wherein said film assembly comprises four rollers.

15           7. An image projector according to Claim 5, wherein one of said rollers is pivotably mounted in said film assembly so as to swing inwardly and outwardly in directions substantially perpendicular to the axes of rotation of said rollers, and

20           wherein said film assembly further comprises a biasing spring, said biasing spring biasing said pivotably mounted roller outward so as to pull the film, when mounted, taut against said plurality of rollers to secure the film on said rollers.

25           8. An image projector according to Claim 5, wherein said film assembly and said lens are slidingly secured to each other such that a distance along the light path between said

lens and the film mounted on said film assembly is variable;  
and

wherein focusing of an image on the film projected  
by said image projector is performed by varying the distance  
5 between said lens and the film.

9. An image projector according to Claim 8, further  
comprising a housing containing said film assembly, said lens,  
said motor and said light source, wherein said light source  
and said lens are secured in said housing; and

means for varying the position of said film assembly  
with respect to said lens and said housing.

10. An image projector according to Claim 8,  
wherein said motor is mounted on said film assembly.

11. An image projector according to Claim 4,  
wherein said periscope further comprises a first mirror, a  
second mirror, and a second aperture.

12. An image projector according to Claim 11,  
wherein said light source, the film, said first aperture, said  
first mirror, said second mirror, said second aperture and  
said lens are arranged in that order along the light path.

13. An image projector according to Claim 11,  
wherein said light source, said second aperture, said second

mirror, said first mirror, said first aperture, the film and said lens are arranged in that order along the light path.

14. An image projector, comprising:

5 a film assembly comprising a periscope and a plurality of rotatably mounted rollers, said plurality of rollers mounting a continuous film so as to scroll about said periscope, in directions substantially perpendicular to axes of rotation of said rollers, such that portions of the film pass in front of a first aperture of said periscope;

a motor for rotating at least one of said rollers so as to cause the film to scroll around said periscope;

10 a light source projecting light through the portions of the film positioned in front of said first aperture, as the film scrolls past said first aperture and across the light path, and through said periscope; and

15 a lens for focusing the light projected through the film and said periscope.

20 15. An image projector according to Claim 14, wherein one of said rollers is pivotably mounted in said film assembly so as to swing inwardly and outwardly in directions substantially perpendicular to the axes of rotation of said rollers, and

25 wherein said film assembly further comprises a biasing spring, said biasing spring biasing said pivotably mounted roller outward so as to pull the film, when mounted,

taut against said plurality of rollers to secure the film on said rollers.

16. An image projector according to Claim 14,  
5 wherein said film assembly and said lens are slidably secured to each other such that a distance along the light path between said lens and the film mounted on said film assembly is variable; and

wherein focusing of an image on the film projected  
10 by said image projector is performed by varying the distance between said lens and the film.

17. An image projector according to Claim 16,  
further comprising a housing containing said film assembly,  
15 said lens, said motor and said light source, wherein said light source and said lens are secured in said housing; and

means for varying the position of said film assembly with respect to said lens and said housing.

20 18. An image projector according to Claim 14, wherein said periscope further comprises a first mirror, a second mirror, and a second aperture.

19. An image projector according to Claim 18,  
25 wherein said light source, the film, said first aperture, said first mirror, said second mirror, said second aperture and said lens are arranged in that order along the light path.

20. An image projector, comprising:  
mounting means for mounting a film;  
scrolling means for scrolling the film mounted on  
said mounting means;

5 light projecting means for projecting light through  
portions of the film mounted on said mounting means and  
scrolling across the light path;

10 light path shifting means for shifting the light  
path of the light projected by said light projecting means  
before or after the light has been projected through the  
portions of the scrolling film; and

15 focusing means for focusing the light projected  
through the scrolling film by said light projecting means and  
shifted by said light path shifting means, so as to project a  
scrolling image formed by a pattern on the scrolling film.